

**REMARKS:**

In the Office Action dated November 2, 2006, claims 1-4 and 6-13, in the above-identified U.S. patent application were rejected. Reconsideration of the rejections is respectfully requested in view of the above amendments and the following remarks. Claims 6 and 11-13 remain in this application, claims 1-4 and 7-10 have been canceled and claim 5 has been withdrawn.

Claims 1-4 and 6-13 were rejected under 35 USC §112, first paragraph as lacking enablement. Claims 1-4 and 7-10 have been canceled and the remaining claims depend directly or indirectly from claim 12. Claim 12 has been amended to indicate that the monomer protein comprises the amino acid sequence described in SEQ ID NO:2 or the amino acid sequence described in SEQ ID NO:2 wherein alanine at position 83 is replaced with a serine, threonine or valine. In view of these amendments, applicants request that this rejection be withdrawn.

Claims 1-4 and 6-13 were rejected under 35 USC §112, first paragraph, as lacking an adequate written description. As discussed above, all of the remaining claims depend directly or indirectly from claim 12. Claim 12 has been amended to indicate that the monomer protein comprises the amino acid sequence described in SEQ ID NO:2 or the amino acid sequence described in SEQ ID NO:2 wherein alanine at position 83 is replaced with a serine, threonine or valine. In addition, applicants point out that only the cysteine at position 83 is related to dimer formation. Since the essential parts of the sequences were known, one could easily determine which modified sequences would have activity. The present invention prevents dimer formation by replacing the critical cysteine with a small amino acid (such as serine, threonine, alanine or valine) which does not affect the 3-

dimensional structure of the protein. Thus, the invention is that dimer formation is not necessary for activity not that a particular sequence or structure is required. Applicants also point out that one skilled in the art would generally assume that amino acids in addition to SEQ ID NO:2 in a protein sequence comprising SEQ ID NO:2 (i.e. a longer sequence containing SEQ ID NO:2) do not interfere with the desired activity. In other words, a protein comprising SEQ ID NO:2 has essentially the same activity as SEQ ID NO:2 itself. In view of these amendments, applicants request that this rejection be withdrawn.

Claims 1-2 and 6-11 were rejected under 35 USC §102(b) as anticipated by Brunner. Claims 1-2 and 7-10 have been canceled and the remaining claims amended to depend directly or indirectly from claim 12. Since the office action indicates that claim 12 is free of the prior art, applicants request that this rejection be withdrawn.

Claims 1 and 4 were rejected under 35 USC §102(b) as anticipated by U.S. Patent No. 5,658,882 (hereinafter '882). Claims 1 and 4 have been canceled and thus this rejection is now moot.

Applicants respectfully submit that all of claims 6 and 11-13 are now in condition for allowance. If it is believed that the application is not in condition for allowance, it is respectfully requested that the undersigned attorney be contacted at the telephone number below.

In the event this paper is not considered to be timely filed, the Applicant respectfully petitions for an appropriate extension of time. Any fee for such an extension together with any additional fees that may be due with respect to this paper, may be charged to Counsel's Deposit Account No. 02-2135.

Respectfully submitted,

By

A handwritten signature in black ink, appearing to read 'M. C. Kitts', with a stylized flourish at the end.

Monica Chin Kitts  
Attorney for Applicant  
Registration No. 36,105  
ROTHWELL, FIGG, ERNST & MANBECK  
1425 K. Street, Suite 800  
Washington, D.C. 20005  
Telephone: (202) 783-6040

MCK/cb